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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,992	09/11/2003	Morten Brok Gentsch	112740-868	9337

29177	7590	10/05/2006

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EXAMINER
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ART UNIT	PAPER NUMBER
2618	

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Response to Arguments

1.   Examiner acknowledges the amendments to Claims 12 and 18 to overcome the rejections under 35 U.S.C. 112 2nd Paragraph thus said rejections are withdrawn.

2.   Applicant's arguments with respect to claims 1 and 11 have been considered but are moot in view of the new ground(s) of rejection.

Examiner respectfully disagrees with Applicants' assertion on Page 11 2nd Paragraph of the Remarks "Also, Damgaard fails to teach or suggest adjusting a control ...". Damgaard teaches power control of a transmitter in an EDGE system (See Col. 2 line 37, lines 49 – 60). Since the EDGE system is a burst system the power of the transmitter will be adjusted for the purpose of transmitting bursts. In order for the power of the transmitter to be adjusted for the bursts there will be an adjustment of the power for the next burst during a time period in between the time window for the previous burst and the time window for said next burst. The time period in between the two time windows comprises a time delay occurring after the first time window has lapsed.

3GPP TS 45.005, hereafter 3GPP, teaches time masking parts, that select at least one time window located at a point where tail symbols of a first data burst are sent (See Annex B, Figure B2), wherein said time window has a predetermined length (See Annex B, Figure B2), and wherein the non-constant-envelope modulation is made more

constant (See Annex B, Figure B2, the use of the two windows enables the 8PSK

modulation, which is a non-constant-envelope modulation, to be more constant).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Damgaard et al. (US 6,670,849) in view of 3GPP TS 45.005 v5.2.0, hereafter 3GPP.

Regarding Claim 1, Damgaard teaches a power control system for a radio

transmitter transmitting a radio signal modulated with non-constant envelope

modulation, comprising: an amplifier that amplifies a signal comprising data bursts

(Figures 1, 2, Columns: 1 lines 48 – 57, 2 line 37, lines 49 – 60, 3 lines 61 – 66, 5 lines

38 – 41); parts for obtaining a first voltage corresponding to a power of the amplified

signal (Column 5 lines 38 – 41, P=VI thus the voltage V is known if the power P is

known); time masking parts for measuring the first voltage, in at least one time window

with a predefined length, of a first data burst to be used in a comparison step (Figure 2,

Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 25, the power level is known thus

the voltage level is known); a comparator for comparing the first voltage with a

reference voltage and producing a comparison result (Figure 2, Column 7 lines 20 –

25); and a controller, responsive to the comparator that adjusts a control signal of the

amplifier after a predetermined time delay, occurring after the time window has lapsed,

if the comparison result indicates that the first voltage deviates more than a predefined

threshold value from the reference voltage (Figure 2, Columns: 1 lines 48 – 57, 3 lines

61 – 66, 7 lines 20 – 45, since the EDGE system is a burst system the power of the

transmitter will be adjusted for the purpose of transmitting bursts, in order for the power

of the transmitter to be adjusted for the bursts there will be an adjustment of the power

for the next burst during a time period in between the time window for the previous burst

and the time window for said next burst, the time period in between the two time

windows comprises a time delay occurring after the first time window has lapsed).

Damgaard does not teach time masking parts, that select at least one time

window located at a point where tail symbols of a first data burst are sent, wherein said

time window has a predetermined length, and wherein the non-constant-envelope

modulation is made more constant.

3GPP teaches time masking parts, that select at least one time window located

at a point where tail symbols of a first data burst are sent (See Annex B, Figure B2),

wherein said time window has a predetermined length (See Annex B, Figure B2), and

wherein the non-constant-envelope modulation is made more constant (See Annex B,

Figure B2, the use of the two windows enables the 8PSK modulation, which is a non-

constant-envelope modulation, to be more constant).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the GSM system of Damgaard with the time mask

circuitry of 3GPP for the purpose of enabling said system to meet the requirements of

the pan-European digital cellular telecommunications systems, which is GSM.

Regarding Claim 11, Damgaard teaches a method for power control in a radio

transmitter transmitting a radio signal modulated with non-constant envelope

modulation, the method comprising the steps of: amplifying a signal to result in an

amplified signal, the amplified signal including data bursts (Figures 1, 2, Columns: 1

lines 48 – 57, 2 line 37, lines 49 – 60, 3 lines 61 – 66, 5 lines 38 – 41); obtaining a first

voltage which corresponds to an output power of the amplified signal (Column 5 lines 38

– 41, P=VI thus the voltage V is known if the power P is known); measuring the first

voltage, in at least one time window with the predefined length, of the first data burst to

be used for a comparison (Figure 2, Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines

20 – 25, the power level is known thus the voltage level is known); comparing the first

voltage with a reference voltage and producing a comparison result (Figure 2, Column 7

lines 20 – 25); and adjusting a control signal used in the amplifying step after a

predetermined time delay, occurring after the time window has lapsed, if the comparison

result indicates that the first voltage deviates more than a predefined voltage value from

the reference voltage (Figure 2, Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 –

45, since the EDGE system is a burst system the power of the transmitter will be

adjusted for the purpose of transmitting bursts, in order for the power of the transmitter

to be adjusted for the bursts there will be an adjustment of the power for the next burst

during a time period in between the time window for the previous burst and the time

window for said next burst, the time period in between the two time windows comprises a time delay occurring after the first time window has lapsed).

Damgaard does not teach performing time masking to select at least one time window having a predetermined length and being located at a point where tail symbols of a first data burst are to be sent, wherein the non-constant-envelope modulation is made more constant.

3GPP teaches performing time masking to select at least one time window having a predetermined length and being located at a point where tail symbols of a first data burst are to be sent (See Annex B, Figure B2), wherein the non-constant-envelope modulation is made more constant (See Annex B, Figure B2, the use of the two windows enables the 8PSK modulation, which is a non-constant-envelope modulation, to be more constant).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the GSM system of Damgaard with the time mask circuitry of 3GPP for the purpose of enabling said system to meet the requirements of the pan-European digital cellular telecommunications systems, which is GSM.

Regarding Claim 2, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claim 1. 3GPP further teaches wherein the time masking parts select a time window located at an edge of an active burst (Annex B, Figure B2).

Regarding Claims 3, 13, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claims 2,12. Damgaard further teaches wherein the edge is in one

of a ramp up position and a ramp down position of the active burst (Column 1 lines 48 –
57).

Regarding Claims 4, 14, Damgaard in view of 3GPP teaches all of the claimed
limitations recited in Claims 1, 11. Damgaard further teaches wherein the
predetermined time delay corresponds to a delay between a moment in time at which a
value of the control signal is obtained and a time at which a subsequent data burst
begins (Figure 2, Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 45, since this is
a burst system there will be times when the control element adjusts the error signal
before the transmission of a subsequent burst).

Regarding Claims 5, 15, Damgaard in view of 3GPP teaches all of the claimed
limitations recited in Claims 4, 14. Damgaard further teaches wherein the subsequent
data burst is a next data burst to the first data burst for which the first voltage was
measured (Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 45, since this is a
burst system there will subsequent bursts).

Regarding Claims 6, 16, Damgaard in view of 3GPP teaches all of the claimed
limitations recited in Claims 4, 11. 3GPP further teaches wherein the predefined length
of the at least one timing window is approximately 4 microseconds (Page 78, Figure
B.2, the 3GPP specification defines the 2+2 microseconds period, which is 4
microseconds).

Regarding Claims 7, 17, Damgaard in view of 3GPP teaches all of the claimed
limitations recited in Claims 1, 11. 3GPP further teaches wherein the predefined length

of the at least one timing window is variable (Page 78, Figure B.2, Page 79, Figure B.3, the window is variable normal bursts and access bursts).

Regarding Claim 8, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claim 1. Damgaard further teaches wherein at least one of the time masking parts and the controller are at least partially implemented using software code run in a processor (Column 4 lines 3 – 10).

Regarding Claims 9, 19, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claims 1, 11. Damgaard further teaches wherein the power control system is implemented in a mobile terminal (Column 3 lines 61 – 66).

Regarding Claims 10, 20, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claims 1, 11. Damgaard further teaches wherein the power control system is implemented in a base station terminal (Column 3 lines 61 – 66, typical base stations use non-linear amplifiers).

Regarding Claim 12, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claim 11. 3GPP further teaches wherein the step of selecting is adapted to select a time window located at an edge of an active data burst (Annex B, Figure B2).

Regarding Claim 18, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claim 11. Damgaard further teaches wherein at least one of the step of comparing and the step of controlling is at least partially implemented using software code (Column 4 lines 3 – 10).

Regarding Claim 21, Damgaard teaches a method for power control in a radio

transmitter transmitting a radio signal modulated with non-constant envelope

modulation, the method comprising the steps of: measuring a first voltage, in at least

one time window (Figure 2, Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 25,

the power level is known thus the voltage level is known); comparing the first voltage

with a reference voltage and producing a comparison result (Figure 2, Column 7 lines

20 – 25); and adjusting a control signal used in an amplifying step after a predetermined

time delay, occurring after the time window has lapsed, if the comparison result

indicates that the first voltage deviates more than a predefined voltage value from the

reference voltage (Figure 2, Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 45,

since the EDGE system is a burst system the power of the transmitter will be adjusted

for the purpose of transmitting bursts, in order for the power of the transmitter to be

adjusted for the bursts there will be an adjustment of the power for the next burst during

a time period in between the time window for the previous burst and the time window for

said next burst, the time period in between the two time windows comprises a time

delay occurring after the first time window has lapsed).

Damgaard does not teach performing time masking on a signal having data

bursts to select at least one time window having a predetermined length and being

located where tail symbols of a first data burst are to be sent, wherein the non-constant-

envelope modulation is made more constant.

3GPP teaches performing time masking on a signal having data bursts to select

at least one time window having a predetermined length and being located where tail

symbols of a first data burst are to be sent (See Annex B, Figure B2), wherein the non-constant-envelope modulation is made more constant (See Annex B, Figure B2, the use of the two windows enables the 8PSK modulation, which is a non-constant-envelope modulation, to be more constant).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the GSM system of Damgaard with the time mask circuitry of 3GPP for the purpose of enabling said system to meet the requirements of the pan-European digital cellular telecommunications systems, which is GSM.

Conclusion

5.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
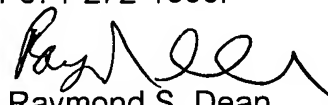
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Raymond S. Dean
September 20, 2006

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